



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,055	07/09/2001	Olaf Kunz	10191/1735	2184
26646	7590	06/09/2004	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			LEYKIN, RITA	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/807,055

Applicant(s)

KUNZ ET AL.

Examiner

Rita Leykin

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-29 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 15-17, 22, 25, 28 and 29 is/are rejected.  
7) ☒ Claim(s) 18-21, 23, 24, 26 and 27 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This office action is in response to communication filed on 3/19/04.

Due to the further consideration the finality of the previous office action is withdrawn. As in the preceding office actions examiner applied prior art by Nashiki US # 5,469,215 and maintain the rejection as follows.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-17, 22, 25, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nashiki US # 5,469,215.

With respect to above claims Nashiki teaches:

- In Fig. 4, the measuring system that detects motor position and outputs a position signal 8 to a speed sensor 5. Wherein the value of the speed sensor 5 output signal VL, is subtracted from motor speed command signal value VLC via subtracter 1 to determine the speed error signal DVL, as in claim 15. The error signal is processed via PID compensator 2, that outputs variable torque signal T, see column 4, lines 64-67 and column 5, lines 1-20. That reads on claims 15 and 29.

- The speed "VL" signal, torque "T" signal and position signal "P", are also supplied to current command value setting means 13. Current command value setting means 13 comprising of an address setting means 91, an adder 12 and three-phase current setting means 10. The components of current command value setting means 13, such as address setting means 91 and the adder 12 are processing input signals "T", "VL" and "P" in form of address setting (position/speed) and perform in conjunction with above PID 2, the function of processor. On the other hand, the address setting means 91, in conjunction with above PID 2 receives the speed signal output VL and the position signal P that are generated based on the output of current command value setting means 13, as in claim 16. The at least other quantity derived from the at least one measuring system is the torque that is the output of PID 2, as in claim 17.
- With respect to claim 22 and 29, a measuring system that generates at least one expected estimate for the at least one measuring system for providing error detection in the measuring system is presented as function of memory 61, wherein the collected speed/position information is stored and wherein memory 61 outputs a torque error compensation data  $MD_1$ . The adder 12 adds the torque error compensation data  $MD_1$  to the torque command T to calculate a current magnitude AM in the electric motor, (see column 6, lines 16-36).
- With respect to claim 25 and 29, the function of comparator for generating an error signal as a function of the output signal of the measuring system and at least one expected estimate is performed by adder 12;

Art Unit: 2837

- With respect to claim 28 the expected estimate is based beside the others on position signal P that is function of the current outputs from three-phase current setting means 10, (see Fig. 5 and column 5, lines 21-66);

Hence, it has been obvious to one of ordinary skills in the art, at the time invention was made to provide a model that forms at least one expected estimate as function of at least one controller quantity that is generated by the controller.

The reason is to improve motor operation.

***Allowable Subject Matter***

1. Claims 18-21, 23, 24, 26 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

2. The following is a statement of reasons for the indication of allowable subject matter. The submitted prior art does not teach:

- The processor that receives a measure of a change in synchronous generated voltage of the electric drive as a characteristic quantity for the error in the at least one measuring system;
- A signal formed in direct-axis current controller, or quadrature-axis controller;
- A reversing switch that relays an error signal;

***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita Leykin whose telephone number is (571)272-2066. The examiner can normally be reached on Monday-Friday 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (571)272-2071. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2837

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rita Leykin  
Primary Examiner  
Art Unit 2837

R.L.



DAVID MARTIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800